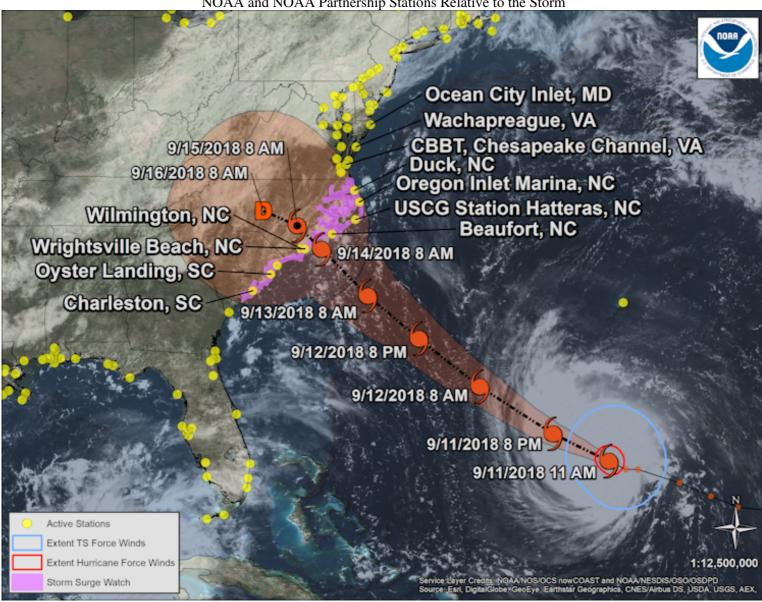




Hurricane Florence QuickLook Posted: 12:00 AST 09/11/2018

NOAA and NOAA Partnership Stations Relative to the Storm



Storm Analysis

As of 09/11/2018 12:00 AST, water levels from Charleston, SC to Oregon Inlet, NC are running up to 1 foot above tidal predictions. Water levels north of Oregon Inlet to Ocean City, MD are running 1.0 to 1.5 feet above tidal predictions. The already elevated water levels from Duck to Ocean City are a result of the strong easterly flow from the weekend weather system.

Winds are fairly light along the Mid-Atlantic coast this morning. Barometric Pressure is holding steady or even rising gradually in some areas.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional real-time and historical inundation information for select stations affected by this storm, please visit <u>Coastal Inundation Dashboard</u>. For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website.

For more information or archived products and reports, please visit the Storm QuickLook Homepage.

Analyst: PFF

Select National Hurricane Center Advisory Information:

BULLETIN

Hurricane Florence Advisory Number 49 NWS National Hurricane Center Miami FL AL062018 1100 AM AST Tue Sep 11 2018

- ...FLORENCE EXPECTED TO RESTRENGTHEN LATER TODAY...
- ...LIFE-THREATENING STORM SURGE POSSIBLE ALONG THE COASTS OF NORTH AND SOUTH CAROLINA...

SUMMARY OF 1100 AM AST...1500 UTC...INFORMATION

LOCATION...26.7N 65.3W

ABOUT 390 MI...625 KM S OF BERMUDA

ABOUT 905 MI...1455 KM ESE OF CAPE FEAR NORTH CAROLINA

MAXIMUM SUSTAINED WINDS...130 MPH...215 KM/H

PRESENT MOVEMENT...WNW OR 295 DEGREES AT 16 MPH...26 KM/H

MINIMUM CENTRAL PRESSURE...950 MB...28.06 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

None.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Watch is in effect for...

- * Edisto Beach South Carolina to the North Carolina-Virginia border
- * Albemarle and Pamlico Sounds, including the Neuse and Pamlico Rivers

A Hurricane Watch is in effect for...

- * Edisto Beach South Carolina to the North Carolina-Virginia border
- * Albemarle and Pamlico Sounds

Interests elsewhere in the southeastern and mid-Atlantic states should monitor the progress of Florence. Additional watches may be required later today.

A Storm Surge Watch means there is a possibility of life- threatening inundation, from rising water moving inland from the coastline, in the indicated locations during the next 48 hours. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov.

A Hurricane Watch means that hurricane conditions are possible within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous.

For storm information specific to your area, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office.

DISCUSSION AND OUTLOOK

At 1100 AM AST (1500 UTC), the center of Hurricane Florence was located near latitude 26.7 North, longitude 65.3 West. Florence is moving toward the west-northwest near 16 mph (26 km/h). A west-northwestward to northwestward motion with a slight increase in forward speed are expected during the next couple of days. On the forecast track, the center of Florence will move over the southwestern Atlantic Ocean between Bermuda and the Bahamas through Wednesday, and approach the coast of North Carolina or South Carolina in the hurricane watch area Thursday and Friday.

Maximum sustained winds are near 130 mph (215 km/h) with higher usts. Florence is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. Florence is expected to begin re- strengthening later today and continue a slow strengthening trend for the next day or so. While some weakening is expected on Thursday, Florence is expected to be an extremely dangerous major hurricane through landfall.

Hurricane-force winds extend outward up to 40 miles (65 km) from the center and tropical-storm-force winds extend outward up to 150 miles (240 km).

The estimated minimum central pressure is 950 mb (28.06 inches).

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water has the potential to reach the following heights above ground if peak surge occurs at the time of high tide...

Edisto Beach to Murrells Inlet...2-4 ft
Murrells Inlet to Cape Fear...4-6 ft
Cape Fear to Cape Lookout including The Neuse and Pamlico River...6-12 ft
Cape Lookout to Ocracoke Inlet...5-8 ft
Ocracoke Inlet to North Carolina/Virginia Border...3-5 ft

The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. For information specific to your area, please see products issued by your local National Weather Service forecast office.

RAINFALL: Florence is expected to produce total rainfall accumulations of 15 to 20 inches with isolated maximum amounts to 30 inches near the storm's track over portions of the Carolinas and Mid-Atlantic States from late this week into early next week. This rainfall could produce catastrophic flash flooding and significant river flooding.

WIND: Hurricane conditions are possible within the watch area by late Thursday or Thursday night, with tropical storm conditions possible by Thursday morning.

SURF: Swells generated by Florence are affecting Bermuda and portions of the U.S. East Coast. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY

Next intermediate advisory at 200 PM AST. Next complete advisory at 500 PM AST.

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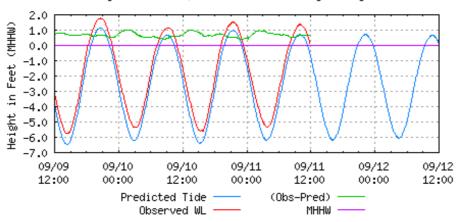
Forecaster Stewart

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Charleston, Cooper River Entrance - Water Level, Charleston, Cooper River Entrance - Winds, Charleston, Cooper River Entrance - Barometric, Oyster Landing (N Inlet Estuary) - Water Level, Wrightsville Beach - Water Level, Wrightsville Beach - Water Level, Wilmington - Water Level, Wilmington - Water Level, Wilmington - Water Level, Wilmington - Barometric, Beaufort, Duke Marine Lab - Water Level, Beaufort, Duke Marine Lab - Winds, Beaufort, Duke Marine Lab - Barometric, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, USCG Station Hatteras - Barometric, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Water Level, CBBT, Chesapeake Channel - Water Level, CBBT, Chesapeake Channel - Water Level, CBBT, Chesapeake Channel - Winds, CBBT, Chesapeake Channel - Barometric, Wachapreague - Water Level, Wachapreague - Water Level, Ocean City Inlet - Water Level, Ocean City Inlet - Winds

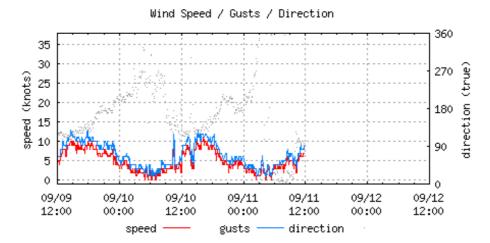
NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 0.13 ft. Predicted: -0.53 ft. Residual: 0.66 ft. Historical Maximum Water Level: Sep 21 1989, 6.76 ft. Next High Tide: 09/11/2018 22:13 (EDT), 0.71 ft.

NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC



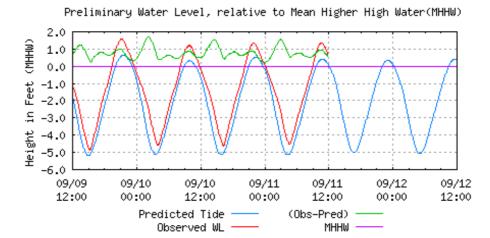
Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 7 knots Gusts: 9 knots Direction: 98° T

NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

Barometric Pressure 1020 1019 1018 æ 1017 1016 1015 1014 1013 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1018.7 mb

NOAA/NOS/CO-OPS 8662245 Oyster Landing (N Inlet Estuary), SC



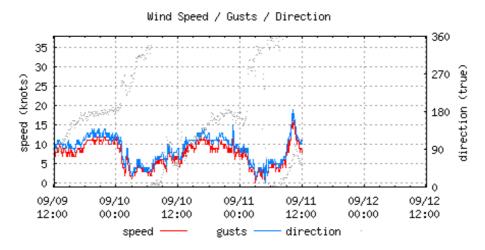
Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 0.72 ft. Predicted: 0.14 ft. Residual: 0.58 ft. Historical Maximum Water Level: Oct 8 2016, 4.64 ft. Next High Tide: 09/11/2018 23:01 (EDT), 0.33 ft.

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 2.0 Height in Feet (MHHW) 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 09/11/2018 12:00 (EDT). Data relative to MHHW Observed: -0.61 ft. Predicted: -1.52 ft. Residual: 0.91 ft. Historical Maximum Water Level: Oct 4 2015, 2.97 ft. Next High Tide: 09/11/2018 21:30 (EDT), 0.74 ft.

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC



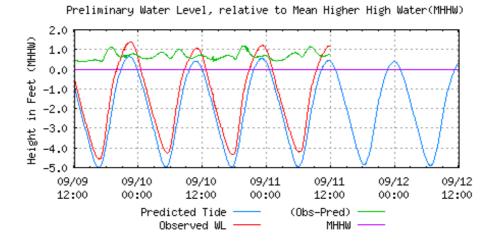
Last Observed Sample: 09/11/2018 12:00 (EDT) Wind Speed: 8 knots Gusts: 11 knots Direction: 50° T

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Barometric Pressure 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 12:00 00:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 12:00 (EDT)
Barometric Pressure: 1019.2 mb

NOAA/NOS/CO-OPS 8658120 Wilmington, NC



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 1.19 ft. Predicted: 0.44 ft. Residual: 0.75 ft. Historical Maximum Water Level: Oct 8 2016, 3.48 ft. Next High Tide: 09/11/2018 23:58 (EDT), 0.38 ft.

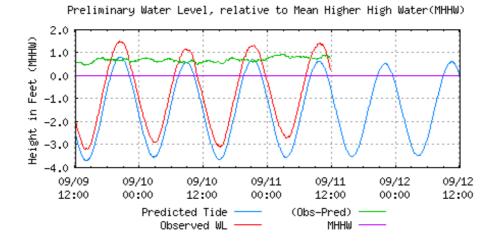
NOAA/NOS/CO-OPS 8658120 Wilmington, NC

Barometric Pressure 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 00:00 12:00 12:00

Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1018.8 mb

barometric pressure

NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 0.26 ft. Predicted: -0.51 ft. Residual: 0.77 ft. Historical Maximum Water Level: Sep 19 1955, 3.39 ft. Next High Tide: 09/11/2018 22:04 (EDT), 0.52 ft.

NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC

Wind Speed / Gusts / Direction 360 35 30 270 direction (true) speed (knots) 25 20 180 15 10 90 5 0 09/09 09/12 09/10 09/11 09/11 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00

Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 4 knots Gusts: 7 knots Direction: 120° T

gusts -

direction

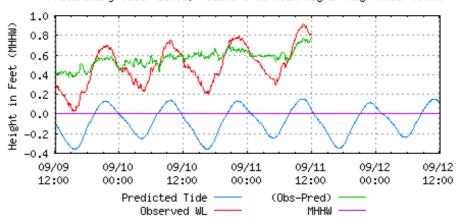
NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC

Barometric Pressure 1020 1019 1018 2 1017 1016 1015 1014 1013 1018 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1019.6 mb

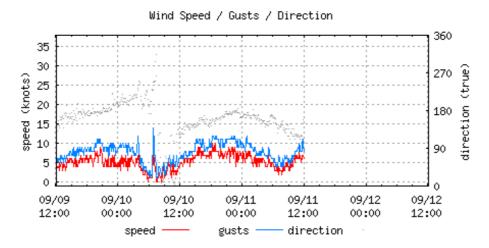
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/11/2018 12:00 (EDT). Data relative to MHHW Observed: 0.82 ft. Predicted: 0.05 ft. Residual: 0.77 ft. Historical Maximum Water Level: Oct 9 2016, 5.76 ft. Next High Tide: 09/11/2018 23:00 (EDT), 0.11 ft.

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



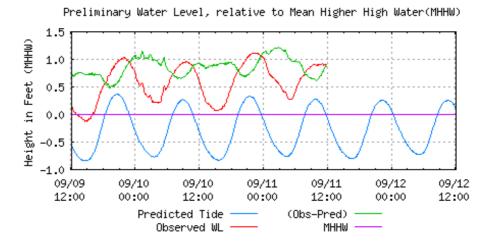
Last Observed Sample: 09/11/2018 12:00 (EDT) Wind Speed: 6 knots Gusts: 8 knots Direction: 154° T

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Barometric Pressure 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 00:00 12:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 12:00 (EDT)
Barometric Pressure: 1019.7 mb

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 0.88 ft. Predicted: -0.02 ft. Residual: 0.90 ft. Historical Maximum Water Level: Aug 28 2011, 6.31 ft. Next High Tide: 09/11/2018 22:17 (EDT), 0.26 ft.

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

Wind Speed / Gusts / Direction 360 35 30 270 direction (true) speed (knots) 25 20 180 15 10 90 09/09 09/12 09/10 09/11 09/12

Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 6 knots Gusts: 7 knots Direction: 204° T

00:00

gusts -

12:00

direction

00:00

12:00

12:00

00:00

12:00

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

Barometric Pressure 1020 1019 1018 E 1017 p 1016 1015 1014 1013 1018 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1019.7 mb

NOAA/NOS/CO-OPS 8651370 Duck, NC

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 3.0 Height in Feet (MHHW) 2.0 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 Predicted Tide (Obs-Pred)

Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 0.46 ft. Predicted: -0.82 ft. Residual: 1.28 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft. Next High Tide: 09/11/2018 21:34 (EDT), 0.44 ft.

MHHW

Observed WL

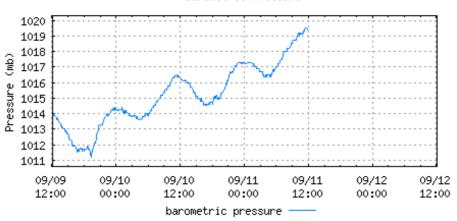
NOAA/NOS/CO-OPS 8651370 Duck, NC

Wind Speed / Gusts / Direction 360 35 30 270 direction (true) speed (knots) 25 20 180 15 10 5 0 Ô 09/11 09/09 09/12 09/12 09/10 09/10 09/11 12:00 00:00 12:00 00:00 12:00 12:00 00:00 speed direction gusts -

Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 8 knots Gusts: 9 knots Direction: 91° T

NOAA/NOS/CO-OPS 8651370 Duck, NC

Barometric Pressure



Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1019.4 mb

NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 3.0 Height in Feet (MHHW) 2.0 1.0 0.0 -1.0 -2.0 -3.0 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 00:00 00:00 12:00 12:00 12:00 Predicted Tide (Obs-Pred)

Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 1.45 ft. Predicted: 0.03 ft. Residual: 1.42 ft.

MHHW

Observed WL

Historical Maximum Water Level: n/a Next High Tide: 09/11/2018 22:30 (EDT), 0.34 ft.

NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Wind Speed / Gusts / Direction 360 35 30 270 direction (true) speed (knots) 25 20 180 15 10 90 5 0 09/09 09/12 09/10 09/11 09/11 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 direction speed gusts -

Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 6 knots Gusts: 9 knots Direction: 116° T

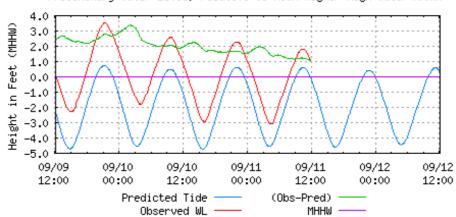
NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Barometric Pressure 1020 1019 1018 E 1017 p 1016 1015 1014 1013 1018 1012 1011 09/09 09/10 09/10 09/11 09/11 09/12 09/12 12:00 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/11/2018 11:48 (EDT)
Barometric Pressure: 1018.6 mb

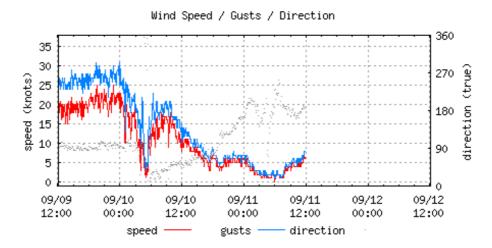
NOAA/NOS/CO-OPS 8631044 Wachapreague, VA

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 1.07 ft. Predicted: -0.00 ft. Residual: 1.07 ft. Historical Maximum Water Level: Feb 5 1998, 4.41 ft. Next High Tide: 09/11/2018 22:49 (EDT), 0.43 ft.

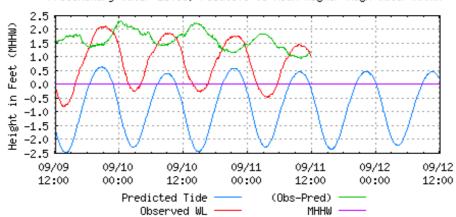
NOAA/NOS/CO-OPS 8631044 Wachapreague, VA



Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 6 knots Gusts: 8 knots Direction: 184° T

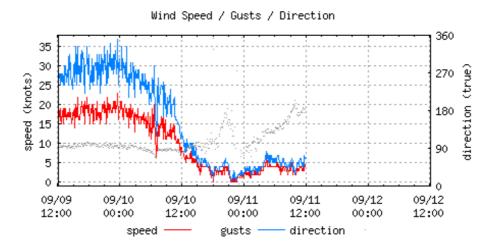
NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/11/2018 11:48 (EDT). Data relative to MHHW Observed: 1.07 ft. Predicted: -0.08 ft. Residual: 1.15 ft. Historical Maximum Water Level: Feb 5 1998, 3.61 ft. Next High Tide: 09/11/2018 22:16 (EDT), 0.47 ft.

NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD



Last Observed Sample: 09/11/2018 11:48 (EDT) Wind Speed: 4 knots Gusts: 6 knots Direction: 185° T

Latest Water Level Observations on MHHW

Station II	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8665530	Charleston, Cooper River Entrance, SC	09/11/2018 11:48 (EDT)	0.13 ft	-0.53 ft	0.66 ft	1.53 ft
8662245	Oyster Landing (N Inlet Estuary), SC	09/11/2018 11:48 (EDT)	0.72 ft	0.14 ft	0.58 ft	1.35 ft
8658163	Wrightsville Beach, NC	09/11/2018 12:00 (EDT)	-0.61 ft	-1.52 ft	0.91 ft	1.80 ft
8658120	Wilmington, NC	09/11/2018 11:48 (EDT)	1.19 ft	0.44 ft	0.75 ft	1.21 ft
8656483	Beaufort, Duke Marine Lab, NC	09/11/2018 11:48 (EDT)	0.26 ft	-0.51 ft	0.77 ft	1.40 ft
8654467	USCG Station Hatteras, NC	09/11/2018 12:00 (EDT)	0.82 ft	0.05 ft	0.77 ft	0.92 ft
8652587	Oregon Inlet Marina, NC	09/11/2018 11:48 (EDT)	0.88 ft	-0.02 ft	0.90 ft	1.12 ft
8651370	Duck, NC	09/11/2018 11:48 (EDT)	0.46 ft	-0.82 ft	1.28 ft	2.05 ft
8638901	CBBT, Chesapeake Channel, VA	09/11/2018 11:48 (EDT)	1.45 ft	0.03 ft	1.42 ft	2.34 ft
8631044	Wachapreague, VA	09/11/2018 11:48 (EDT)	1.07 ft	-0.00 ft	1.07 ft	2.30 ft
8570283	Ocean City Inlet, MD	09/11/2018 11:48 (EDT)	1.07 ft	-0.08 ft	1.15 ft	1.77 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce